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BUSINESS CONSTRAINTS AND GROWTH POTENTIAL OF MICRO AND SMALL MANUFACTURING ENTERPRISES IN UGANDA

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ABSTRACT

Ugandan micro and small enterprises (MSEs) still perform poorly. Studies associating poor performance of manufacturers with lack of finance and low investment ignore micro enterprises. Those focusing on MSEs are either exploratory in nature or employ a descriptive analysis, which cannot show the extent to which business constraints explain the performance of MSEs. Thus, this paper tries to examine the extent to which the growth of MSEs is associated with business constraints while controlling for owners' attributes and firms' characteristics. The results reveal that MSEs' growth potential is negatively associated with limited access to productive resources (finance and business development services), high taxes and lack of market access.

INTRODUCTION

Micro and small enterprises (MSEs) in Uganda play a significant role as they employ 90 percent of the non-farming active population (UBOS, 2003). Around one-third of the Ugandan population was engaged in entrepreneurial activities, particularly MSEs. There are only a few medium and large enterprises. Most Ugandan enterprises have less than 50 employees, the majority witheven less than 20 employees. MSEs are not growing. The industrial sector, which is dominated by MSEs, still contributes less than 20 percent to GDP and has not been performing impressively. During 1997/98 to 2005/2006 its annual growth rate was 1.3 percent only. The sector's efficiency was decreasing, and its technical efficiency was much lower (i.e. 0.19) than those of manufacturers in Cameroon, Ghana, Kenya and Zimbabwe (Gauthier, 2001).

A comparative analysis of firms in different size categories conducted by Gauthier (2001) indicates that the low performance of the manufacturing and other sectors is worsened by the poor performance of MSEs. Reinikka and Svensson (2002) state that the larger Ugandan enterprises face severe constraints. They have shown in their study of medium and large enterprises that investment in productive assets is

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constrained by the low amount of private investment in public complementary assets (e.g. generators), due to poor access to, and quality of, public infrastructure in Uganda.

Compared with large enterprises, MSEs are less efficient and incur a higher cost per unit of revenue. Factors contributing to the unimpressive performance of the Ugandan MSE, as mentioned in different studies, are limited capital and access to finance (Okurut and Bategeka, 2006; Kappel, Lay, and Steiner, 2004; Uganda Microfinance Outreach Plan 2001; UCAP 2001; Mugume and Obwona, 2001). Given MSEs' inaccessibility to external finance, their decisions to upgrade their equipment and machinery by making new investments are further constrained by limited internal sources of financing. Several papers indicate additional constraining factors as inadequate provision of public infrastructure and services that affect private investment (Svensson and Reinikka 2001), unfavourable system of taxation, and high regulatory burden and administrative bureaucracy (Keefer 2000). Other factors mentioned include limited access to differentiated markets which might be related to lack of forward linkages (Kappel, Lay, and Steiner, 2004); the concentration of MSEs in low-quality production and easy entry market segments (Sengendo et al., 2001),high transport and transaction costs (Rudaheranwa, 2000, 2006; Wood and Jordan 2000), corruption (Svensson 2002), low trust and minimalistic entrepreneurial strategies (Kappel 2004; Sørensen 2001), education and poor managerial and skills competence (Nalumansi et al. 2002; Nel and Shapiro 2003), weak support institutions (Krasemann 1996; Kyomugisha 2001), lack of sectoral competitiveness and an overall neglect of MSEs in Uganda (Cotton et al 2003).[1]

The observations by most of the reviewed studies as presented above are based on descriptive results, which are unable to show how the stated business constraints affect the performance of MSEs while controlling for other factors (viz., owner-managers' attributes and firms' characteristics and resource endowment). Similarly, the majority of studies on factors (particularly on the business environment), locking at the growth potential and performance of MSEs in other developing countries, are more descriptive/exploratory in nature[2]. Those studies that utilise multiple regression analysis (e.g. Ishengoma, 2004a; House, 1984; Söderbom and Teal, 2004; Beck, Demirgüç-Kunt and Levine, 2003) overlook business constraints.

Controlling for other factors when associating MSEs' growth potential with business constraints is very important because MSEs are heterogeneous (see Ishengoma and Kappel, 2007; Söderbom and Teal, 2004), and so are affected different by business constraints.. Some business constraints might be a serious problem to micro firms in some sub-sectors but not to others. For example, limited access to long-term financial sources and space of operation are the major obstacles to the growth potential of Ugandan manufacturing MSEs in wood/furniture and metal but not in textiles (Sengondo et al, 2001). These are also

identified by House (1984) as serious constraints to manufacturers but not to traders and service providers. These examples emphasise the need to control for the sub-sector when analysing the extent to which business constraints affect the performance of MSEs.

The findings by Reinikka and Svensson (2001) and World Bank (1994) on the perceptions of manufacturing enterprises on factors constraining investment, future operations and growth during 1994 and 1998 reveal the deteriorating business environment in Uganda. These studies however do specifically indicate the perception of MSEs on factors constraining their performance, although, compared to large firms, MSEs perceive business constraints differently and might be affected differently by them (see Klapper, Amit, Guillén, Quesada, 2007).

Given the role played by MSEs in Uganda, a study that specifically addresses how the business environment affects their growth potential is very important. In line with Reinikka and Svensson (2001) postulation, that the rate of economic growth is positively associated with the rate of investment, factors in the business environment which constrain investment could in turn be the root cause of poor economic growth of the manufacturing sector in Uganda.

To fill the identified gaps, this paper tries to examine the extent to which the growth potential and performance of MSEs is associated with business constraints (viz., investment in productive assets, high taxes and limited access to market and productive resources such as loans and business development services (BDS)), while controlling for owners' attributes and firms' characteristics). The paper will add on the body of knowledge by utilise an advanced analytical approach, viz., a liner regression model and a logit model, which provide for the control of other variables. This paper is in line with the above arguments that business constraints seem to be among the factors constraining investment, and therefore are likely to be the major cause of poor performance and growth of manufacturing MSEs in Uganda. More specifically, the paper tries to

The rest of the paper is organised as follows. Section 2 gives an economic overview of MSEs and the business environment in Uganda. Section 3 conceptualises the relationships between business constraints and MSEs' growth and performance. Based on the reviewed literature, this section states the hypotheses to be tested. Section 4 describes the research methodology followed by this paper while Section 5 presents and discusses the empirical findings. Section 6 concludes the stady and makes recommendations.

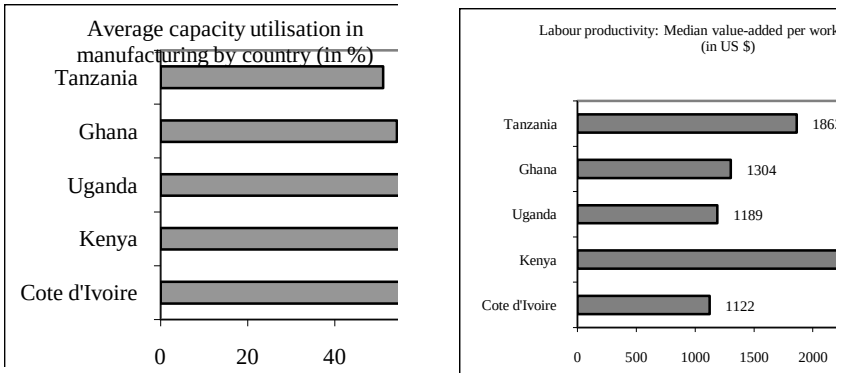
OVERVIEW OF THE MANUFACTURING SECTOR AND BUSINESS ENVIRONMENT IN UGANDA

An overview of the manufacturing sector

During the last ten years Uganda has achieved an average GDP growth rate of 6.7 percent, which was mainly accounted for by the industrial and the service sector, since the share of the agricultural sector in GDP fell from 56 to 41 percent. Between 1997/98 and 2005/06 the Ugandan manufacturing sector contributed an annual average of 9percent to total GDP, while the service and agricultural sector accounted for 40 percent . The sector's annual growth rate was around 1.3 percent. This rate is low and likely to hinder Uganda's expectation of poverty reduction and meeting its Millennium Development Goals (MDGs (see Kappel, Lay and Steiner 2005; Lawson, McKay and Okidi 2006; Bussolo, Godart, Lay and Thiele, 2006).

In 2002, the capacity utilisation of the Ugandan manufacturing sector, when compared with those of some other African countries, was around the mean (i.e. 58 percent) but lower than that of the manufacturing sectors in Kenya (63 percent) and Cote d'Ivoire (71 percent) (Figure 1)[3]. Uganda's labour productivity is also lower than that of other African countries, whereas its monthly wages for unskilled labour are higher than those of India and China (Steel, 2003). These are indications of the low competitiveness of the Ugandan manufacturing sector at international and regional level. Steel (2003) also indicates that labour productivity of micro, small and medium enterprises (MSMEs) in Uganda is lower than that of MSMEs in Kenya and Tanzania, while labour productivity of large firms in Uganda is higher than that of the latter two countries.

Figure 1: Ugandan manufacturing productivity compared withother African countries



Source: Steel, W. (2003): Investment Climate Assessment Uganda 2002/2003: Some Initial Results and Comparisons, Paper Presented to the Private Sector Competitiveness Workshop, Kampala – September 4, 2003.

The majority of non-farming activities, including manufacturing, in Uganda are concentrated in MSEs (UBOS, 2003), of which micro enterprises (i.e. those with less than 5 employees) are dominant. There are around 800,000 MSEs that employ about 90 percent the of non-farming active population (UBOS, 2003). Despite the contribution of these firms to employment, their performance and growth have been poor, a situation that worsens the overall performance of the Ugandan manufacturing sector and the economy at large. According to Reinikka and Svensson's (2001) statistics, these firms seem not to upgrade their investment in productive assets, are inefficient and incur high costs per unit of revenue.

The business environment in Uganda

As mentioned in the previous section, among the factors hindering the growth potential and performance of the manufacturing sector, particularly MSMEs in Uganda, is the poor business environment (i.e. the presence of major constraints to investment, competitiveness and growth). In 1998, Ugandan enterprises ranked between major and severe, obstacles such as high utility prices, high taxes, poor utility services (electricity, water, telephones), high interest rates and corruption (see Table 1). None of these obstacles was ranked between major and severe in 1994.

Table 1: Ranking of constraints to investment, future operations and growth in 1994 and 1998

Factors	Ranking in 1998*	Ranking in 1994**
High utility prices	Between 4 and 5	Between 3 and 4
High taxes	Between 4 and 5	-
Poor utility services (electricity, water, telephones)	Between 4 and 5	Between 3 and 4
High interest rate	Between 4 and 5	Between 3 and 4
Corruption	Between 4 and 5	-
Access to finance	Between 3 and 4	Between 3 and 4
Crime and security	Between 3 and 4	-
Uncertainty about government policies	Between 3 and 4	Between 2 and 3
Lack of skilled labour	Between 3 and 4	Between 2 and 3
Exchange rate	Between 3 and 4	Between 1 and 2

*Source: * Reinikka, Svensson (2001; ** World Bank (1994)*

Note: 5, 4, 3, 2, and 1 stand for severe, major, moderate, minor, and no obstacles respectively.

In 1998, obstacles rated between moderate and major include access to finance, crime and security, uncertainty about government policies, lack of skilled labour and the exchange rate. In 1994, most of these obstacles were rated between minor and moderate but access to finance was rated the same, indicating lack of improvement. The way enterprises ranked constraints to investment, future

operations and growth in 1994 and 1998 implies that the business environment in Uganda has been deteriorating during these years.

Compared with other countries, in 2002/2003, the percentage of firms which indicated that electricity, transport, cost of financing, tax rates, access to financing were major or very severe constraints in Uganda are higher than the figures for China and Turkey, but lower than that of firms in Kenya (Steel, 2003). Though the reported frequencyof power outages in Uganda is slightly higher (37) than that of Kenya (33), the percentage of Ugandan firms (35 percent) owning a generator is lower than that of Kenyan firms (70 percent). The difference might be explained by the domination of MSEs in the Ugandan economy, as these firms have very low investment in complementary public assets (Reinikka and Svensson, 2002). In 2002/2003, the percentage of large firms (i.e. 69 percent) that owned a generator was more than two times higher than that of MSMEs (31 percent) (Steel, 2003).

The literature reviewed above specifically neither indicates the perception of MSEs on the constraints nor address the effect of these constrains on the growth potential of MSEs. A study analysing the extent to which business constraints affect MSEs is very important since MSEs perceive business constraints differently from large firms and might be affected differently by the constraints (see Klapper, Amit, Guillén, Quesada, 2007).

Conceptualising the link between business constraints and MSEs' growth or performance

The paper addresses four types of business constraints, whichare limited market access, high tax rates lack of , access to productive resources and investment obstacles.

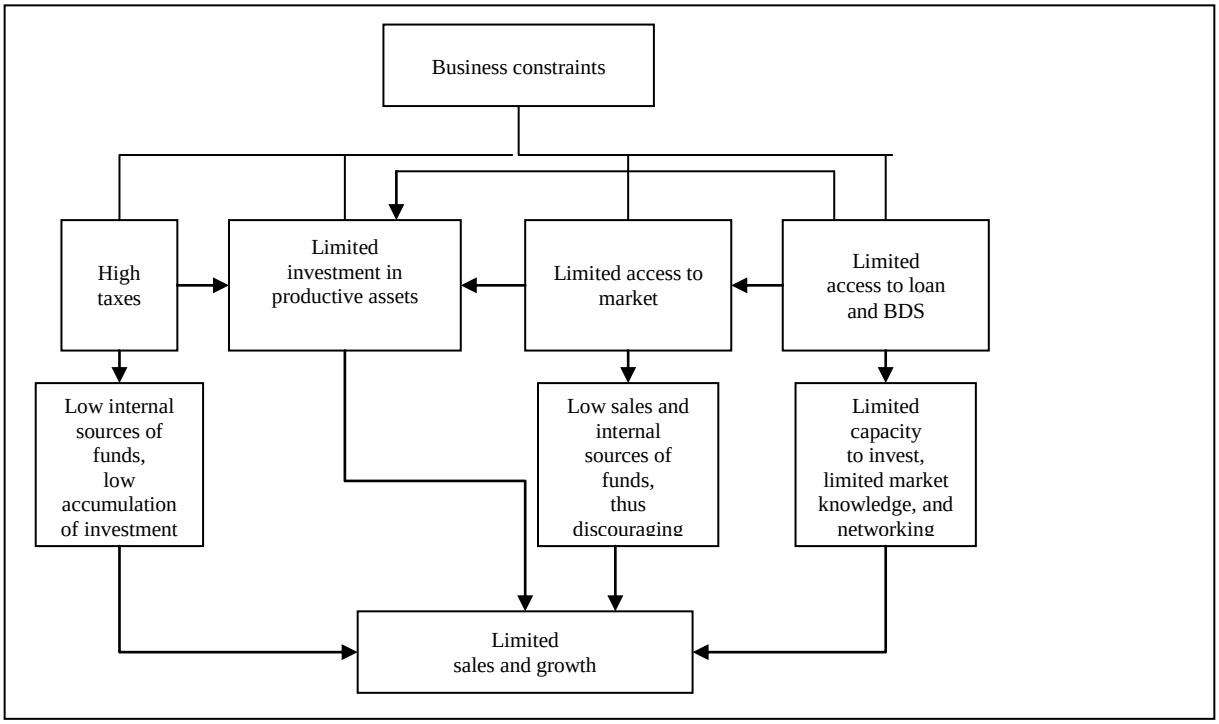
The theoretical consideration on the link between business constraints and the growth potential or performance of MSEs can be viewed from different angles. Business constraints may, on the one hand, limit investment upgrading (or physical capital accumulation). On the other hand, they may constrain a firm's ability to undertake its daily operations, since they may reduce its internal financing and capacity to make proper business decisions. Moreover, they may interrupt a firm's business operations, and therefore retard its performance.

The role of investment in economic growth has been acknowledged in different economic and/ or strategic management literature. At the macro level the traditional approach to growth associates national or regional economic growth with capital accumulation (level of investment in physical assets). In the global

value chain literature, it is argued that technical upgrading (i.e. investment in modern technology) is among the ways to increase firms' competitiveness in the global market. Following the argument by Reinikka and Svensson (2001), factors that constrain firms' investment consequently limit their growth.

The business constraints under examination are expected to limit investment upgrading, and therefore limit firms' growth potential and performance in several ways as indicated in Figure 2. When MSEs have limited access to relatively differentiated markets they are forced to operate in low-income market segments. This limits their levels of sales and profits since most of them compete for the same customers (Sengendo et al., 2001). Low sales and profits may discourage firms' future investments, and therefore constrain their growth potential and performance. Moreover, the majority of MSEs, particularly those involved in manufacturing, have limited access to external financing. As a result, they mainly depend on their internal sources to finance investment (Ishengoma, 2005; Reinikka and Svensson, 2001; Arimah, 2001; Morrisson, 1995; Adam, 1995). Thus, low profits may imply limited internal sources, which may in turn limit firms' capacities to upgrade their investments.

Figure 2: Conceptual relationship between business constraints and performance



Source: Authors' figure

High tax rates reduce firms' internal sources of finance. They also discourage MSEs from expaning their operations and becoming visible to governmental officials, since being visible is likely to increase the cost of operating formally in some developing countries like Uganda (Ishengoma, and Kappel, 2007). Based on the above arguments, the paper hypothesises the following.

H1: *Limited access to markets (i.e. limited customers coupled with high competition) is expected to limit the growth potential and performance of MSEs.*

H2: *High tax rates are expected to constrain the growth potential and performance of MSEs.*

MSEs may overcome the problem of limited profits if they have access to external finance (e.g. loans). This may supplement their limited internal sources, and therefore enable them to upgrade their investment (physical assets). Through investment upgrading, they are likely to increase their productivity (Ishengoma, 2004b; Kimuyu, 2004) and to improve the quality of their products. Consequently, their market access can be enhanced since they may be able to target customers with relatively higher incomes. They may also utilise loans to expand their level of operation by increasing output. This may increase their capacity utilisation, and therefore reduce overhead costs per unit, hence increaseing the productivity and competitiveness of their products.

Among the factors expected to hinder the growth potential of MSEs is their limited access to BDS (viz., marking information, networking, short-term training, counselling and consultancy services) (Ishengoma and Kappel, 2005). Access to marketing information is expected to increase MSEs' market knowledge on the behaviour of their customers, price, and the best sources of inputs. Through counselling and consultancy services, MSEs can solve some of the technical problems they face. Their participation in networking activities may enable them to get more technical and marketing information about the behaviour of their customers in honouring their debts, new customers and business partners. All of the above factors are expected to reduce their transaction costs, increase their internal sources of finance for upgrading their assets, and raise their sales level and productivity, hence growth. Thus, the paper hypothesises the following.

H3: *Access to productive resources (BDS and finance) is expected to positively affect the growth potential and performance of MSEs.*

Besides the above-stated obstacles, MSEs may fail to upgrade their investments due to the high cost of capital goods and related technical services. Rudaheranwa (2000, 2006) reports that poor transport systems and high domestic and regional transport costs in Uganda increase the price of capital goods, which in turn discourages investment in capital goods that have to be transported over long

distances. This argument might apply to land-locked countries which greatly depend on imported capital goods and spare parts.

The cost of capital goods and spare parts may also be inflated by complicated and bureaucratic import procedures as well as high taxes and corruption. Given limited funds and the inadvisable of investing in physical assets, MSEs are likely to be greatly discouraged find upgrading their investment in productive assets. Since the manufacturing sector in Uganda seems to be in its infancy as it is dominated by MSEs, there might be a limited supply of technical services to facilitate investment upgrading and maintenance.[4] Limited supply of the services may result in high costs of the services, which might be unaffordable to MSEs. Therefore the study hypothesises the following.

H4: Investment obstacles are expected to constrain the growth potential and performance of MSEs.

Methodology

Linking performance and growth potential to business constraints

Based on the conceptual relationships described above, this paper models the growth potential (incositu) and performance (lnsalepm) as functions of business constraints (bconst) while controlling for firm level and owner-manage' variables (contrv). It is important to note that the majority of MSEs do not keep books of accounts to facilitate the estimation of growth rates over a period of time. Thus, an interval question on the average level of monthly sales was used to solicit data on the value of sales attained by sample MSEs.[5] To reduce the diversity of the monthly sales values, the variable was transformed into the natural logarithm (i.e. lnsalepm). Sample MSEs were also asked to assess their income situation (i.e. whether it increased, remained the same, or declined). To measure the perception of growth of their income, the paper constructs a dummy variable (incositu) as dummy one if a firm experienced growth in income and zero if otherwise.

To associate performance (lnsalepm) with business constraints (bconst) the paper employs a liner regression model as presented below.

$$\ln Salepm_i = a + \beta_1 bconst_i + \beta_2 contrv_i + e_i \qquad 1$$

Where β_1 and β_2 are parameters to be estimated, while a and e are constant and the error term, respectively. The terms, bconst and contrv, are business constraints and control variables. The approaches used to measure bconst and contrv are addressed in the following sections. The term, i stands for a firm (i=1, 2, 3, … 103).

In relating the growth potential of income (incositu) to business constraints (bconst), the paper utilises a logit model. This model indicates the probability of firms experiencing growth in income, given business constraints. The conditional

expectation of the growth potential of income (incositu) given explanatory variables: business constraints (bconst) and control variables (contrv) are:

$$E\left[in\cos itu_i \middle| bconst_i, contrv_i\right] = P\left[e_i \succ -V(bconst_i, contrv_i)\right] = F\left[(bconst_i, contrv_i)\right] \quad (2)$$

where e_i is a disturbance term with mean zero, and variance equals one. P is the probability distribution function, and F is the cumulative normal distribution function with unity variance. The term 'V' represents the explanatory variables (business constraints) and controllable variables. The term i stands for a firm (i = 1, 2, 3, …105). The variables: bconst and contrv are defined as earlier.

Business constraints

This paper focuses on four categories of business constraints (bconst): limited market access, high tax rates, access to productive resources and investment obstacles. The MSE survey which the paper utilises contains information on the questions regarding the extent to which the success (income growth and sales performance) of their businesses was constrained by limited market access, high taxes, and investment obstacles.

Sample firms were asked to rank different business constraints, including lack of customers, and severe competition as first, second, third or fourth problem, according to the extent to which they constrain their business success. Using responses to these questions, the paper captures limited access to market as dummy limited market access (mktpr12). This dummy equals one for firms that indicated either lack of customers or/and severe competition as a first or/and second problem; and zero otherwise.

Responses to the questions regarding high taxes and investment obstacles were structured on an unbalanced (negative skewed) 6- pointscale: a very severe constraint, a constraint, an average constraint, a moderate constraint, a minor constraint, not a constraint at all. By using the responses tothese questions, the paper captures high taxes (formtaxd) as dummy one for firms that indicated high taxes as a severe constraint, and zero otherwise.

Investment obstacles are indicated by two variables, viz., investment obstacles (investob) and investment trend (invmac2a). The paper utilises responses to two questions (i.e. high cost of equipment and spare parts and high cost of maintenance services) to construct an average index value indicating investob.[6] Investment obstacles may be reflected by trends in investment, in that those facing more obstacles may fail to upgrade their physical assets, while those facing relatively less obstacles may upgrade their equipment, hence experiencing growth in investment. Thus, responses to questionas an a positive skewed four-point scale on the trend in investment for the past five years were utilised to construct an index

value measuring invmac2a.[7] Since investob and invmac2a indicate investment obstacles, they are included in the models one at a time.

The paper utilises responses to the questions regarding limited access to business development services and finance, which were categorised on an unbalanced (negative skewed) 6 point-scale as described above to construct an index variable indicating limited access to productive resources (bdsfin1). Pairwise correlation test (Appendix 1A) shows that investment obstacles and limited access to productive resources are significantly and positively correlated. Further test on the equality of the parameters of these variables indicates that their effects on monthly sales are equal (Appendix 1B). In this respect, these variables are included in the models one at a time. Market access (mktpr12) and bdsfin1 are weakly and significantly associated. Thus, the paper incorporates an interactive variable 'inbdsmkt' to capture the shared effect of mktpr12 and bdsfin1 on growth potential and performance.

Control variables

The empirical models include two categories of control variables (contrv): owner manager's attributes (gender, owner's level of education and his/her motivation to start a business) and a firm's characteristics (location, employees' education in business and the manufacturing sub-sector). These variables are in one way or another expected to have an effect on the growth potential and sales performance of manufacturing MSEs and may also interact with some business constraints. With respect to gender, it has been argued in several studies that women-owned firms are concentrated in less performing industries; are less likely to expand their businesses (e.g. upgrade their investments) since they are risk-averse and afraid of being taken over by their male counterparts; have relatively less access to external finance; and have limited space of operation since the majority of women-owned businesses are home-based (see detailed discussions in Ishengoma, 2004a).

It has also been argued in the entrepreneurial literature that business performance or growth is related to the owner's motivation to establish the business. If the owner's motivation to establish the business is to be self employed, then the business is likely to prosper, while if the owner's motivation to start the business is for meeting his/her household's subsistence needs, then the business is not likely to grow and perform well. These enterprises follow minimalistic strategies (Murphy, 2002).

The link between managers'/owners' education and firms' performance as well as growth is addressed in the economic literature. One ofthe categories of human capital effects on firms' competitiveness is the allocative effect. This effect is related to managers'/owners' education, in that those with relatively higher levels of education have more ability to efficiently allocate resources to more productive lines of business and to select profit maximising inputs-combinations (see Corvers,

1997; Welch, 1970). Walter, et al. (2003) and Bagachwa and Mbelle (1995) emphasise the role of entrepreneurial/business education in the growth/performance of the firm. They argue that a firm whose management has received business/entrepreneurial education is likely to perform better than this without these type of education. Loan providers use owner-manager's education levels as an indication of their ability to utilise resources to generate profits and be able to meet their obligations. Thus, firms with relatively beteer educated owners are likely to have more access to external finance.

The study captures owner-managers' attributes using three indicators: gender measured as dummy one if a firm is owned by a male and zero otherwise; and dummy education of the owner (eduow2) indicated as one if it is at least advanced secondary education and zero otherwise. The last one is dummy motivation to start the business (selfemp2) measured as one if it is to be self-employed and zero otherwise.

Since the economic infrastructure and social services are not equally distributed in developing countries like Uganda, it is possible that some urban areas (particularly in the capital city) are relatively more favoured than others. Favoured areas may also tend to attract capital (e.g. foreign investment) and skilled labour (Krugman, 1998; Ishengoma, 2006), which, together with the presence of the supply of non-tradable inputs, may increase market linkages in these areas. Thus, firms located in these areas are likely to perform better or experience growth.

The sector/line of business which a firm is in is likely to be related to investment decisions and competitiveness. The link between the sector and investment decisions or competitiveness is explained by different empirical studies such as Söderbom (2001), Teal (1999), and Ishengoma (2004b), which reveal that firms operating in different sectors differ in their investment decisions and productivity. To capture firm-level characteristics, the paper utilises three variables: dummy location indicated as one for firms operating in Kampala and zero otherwise; dummy education in business (edubusi) measured as one for firms with some employees having business education; and dummy sector (typebu1) indicated as one for firms in metal, electrical and furniture and zero if in leather and textiles.

Data

The paper utilises data collected in March and April 2003 to analyse the business constraints faced by MSEs in Uganda[8]. The data was collected by means of a structured questionnaire, which was personally administered by a team of reasearchers from the Cente for Basic Research, Kampala. A number of issues covered in this survey focused on firms' history, development, employees' education, investment behaviour, sales and obstacles they face. Using stratified random sampling, 265 MSEs were interviewed, of which around 42 percent were in manufacturing and others in trade and services. The majority of them were

located in urban centres, i.e. Kampala, Jinja, Masaka, Mbarara and Katwe, with only 10 percent in rural areas. The sample MSEs employed less that 20 workers.

This paper focuses on the 105 manufacturing firms that responded to all the questions . Based on the firms' characteristics (Table 2), 74 percent of the sample firms were in metal, electrical and furniture; and 26 percent were textiles/clothes and leather. Forty-five percent of the sample firms were operating in Kampala and the rest outside Kampala. One-third of the sample reported to have some employees with education in the field of business.

Table 2:Summary statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Average monthly sales (Salepm)	105	320.95	285.87	15	1000
Natural log of the average monthly sales (Lnsalepm)	105	5.31	1.05	2.71	6.91
Dummy income growth (Incositu)	105	0.29	0.46	0	1
Index value of limited access to productive resources (bdsfin1)	105	0.65	0.26	0	1
Have access to loan for t he past 5 years (Loanuse)	102	0.24	0.43	0	1
Dummy high taxes (Formtaxd)	105	0.32	0.47	0	1
Index value of investment trend (invmac2a)	105	0.41	0.35	0	1
Index value of investment obstacles (Investob)	105	0.66	0.25	0	1
Dummy limited access to market (mktpr12)	105	0.36	0.48	0	1
Dummy gender (gender)	105	0.78	0.42	0	1
Dummy motivation to start the business (selfemp2)	105	0.56	0.50	0	1
Dummy education of the owner (eduow2)	105	0.49	0.50	0	1
Dummy education in business (Edubusin)	105	0.33	0.47	0	1
Dummy sector (typebu1)	105	0.74	0.44	0	1
Dummy location (location)	105	0.45	0.50	0	1

Source: Authors' computation.

Regarding the owner-managers' attributes, only 22 percent of the sample firms were owned and managed by women and the rest by men. Fifty-six percent of the owner-managers started their businesses because they wanted to be self-employed. Around half of the owner-managers had at least advanced secondary education. The summary statistics also indicate that the average monthly sales attained by the manufacturing sample MSEs was Ugandan shillings (Ushs) 320,950 and very few attained above Ushs. one million. Among the 105 sample firms, 29 percent experienced growth in their income.

With respect to the factors that constrain MSEs from attaining higher performance and growth, around one-third of the sample reported that high taxes are a severe obstacle. The majority of the sample MSEs indicated that limited access to productive resources and high costs of maintenance, spares and machinery are

above average obstacles. Lack of access to finance has been a major problem faced by MSEs as only 24 percent of the sample firms reported to have received loans during for the past five years. On average, sample MSEs made a small upgrading of their investment in productive assets. Limited market access has an average index value of 0.36, indicating a merely moderate constraint.

EMPIRICAL RESULTS AND DISCUSSION OF THE FINDINGS

Table 4 offers regression results on Equation 1, which associates MSEs' performance (monthly sales) with business constraints. Since access to productive resources (bdsfin1) and investment constraints (investob) are included in the equation one at a time, Models A and B depict results for the equation incorporating the former variable and the latter, respectively. As shown in Table 3, Models A and B explain around 34 and 29 percent of monthly sales, respectively.

Table 3:Business constraints and performance of MSEs

	Model A		Model B	
	Coef. (Std. Err).	t - values	Coef. (Std. Err).	t - values
Limited access to productive resources (bdsfin1)	-0.336 (0.432)	-0.78	___	__
Investment obstacles (investob)	__	__	0.023(0.399)	0.06
Investment trend invmac2a	0.638*** (0.272)	2.34	___	__
Limited access to market (mktpr12)	-1.062* (0.644)	-1.65	-0.243(0.20)	-1.21
Sector (typebu1)	0.561*** (0.249)	2.26	0.609***(0.251)	2.43
Location	-.159 (0.182)	-0.87	-0.186 (0.189)	-0.99
Gender	-0.656*** (0.249)	-2.63	-0.71***(0.254)	-2.79
Education in business (edubusin)	0.459*** (0.208)	2.21	0.479***(0.219)	2.18
High taxes (formtaxd)	-0.326* (0.207)	-1.57	-0.363*(0.201)	-1.80
Education of the owner (eduow2)	0.540*** (0.190)	2.84	0.53***(0.194)	2.72
Motivation to start the business (selfemp2)	0.317* (0.199)	1.59	0.397**(0.201)	1.97
Interaction bdsfin1*mktpr12 (inbdsmkt)	1.321 (0.865)	1.53	___	__
_cons	4.972 (0.369)	13.47	5.037***(0.374)	13.47
Number of obs =	103		103	
F(9, 93)	4.35		4.28	
Prob > F	0,000		0.0001	
R-squared	0.3447		0.2931	
Adj R-squared	0.2655		0.2247	

Source: Authors' computations.

Note: Dependent variable: Natural log of the average monthly sales (lnsalepm), The level of significance: < or =1 %, between 1% to 5%, > 5% to 10%, imply very significant, significant, and weakly significant, respectively. Figures in brackets are standard errors.
The terms in the table are as defined in Table 3.

Table 4 Panel A provides the logit estimates for Equation 2, which tries to associate the growth potential of income (*incositu*) with business constraints, while the results in Panel B show the marginal effects of business constraints on the predicted probability for a firm to experience income growth. The discussion is based on the results in Panel B since they show not only the direction of the relationship between income growth and business constraints, but also the effects of the marginal change in business constraints on the probability ofgrowing.

Table 4:Logit estimates

Panel A : Logit estimates				**Panel B: Marginal effects after logit**			
logit incositu bdsfin1 invmac2a mktpr12 typebu1 location gender edubusin formtaxd eduow2 selfemp2 inbdsmkt				y = Pr(incositu) (predict). Thus, y = 0.23.			
Variable	Coef	Std Err	z	variable	dy/dx	Std Err	z
Limited access to productive resources (bdsfin1)	-4.411***	1.421	-3.1	bdsfin1	-0.780***	0.243	-3.21
Investment trend (invmac2a)	0.985	0.720	1.37	invmac2a	0.174	0.127	1.38
Limited access to market (mktpr12)	-2.436*	1.619	-1.5	mktpr12*	-0.364*	0.204	-1.78
Sector (typebu1)	0.691	0.681	1.01	typebu1*	-0.364	0.098	1.13
Location	-1.224**	0.561	-2.18	location*	-0.212**	0.090	-2.35
Gender	-1.297**	0.648	-2	gender*	-0.265**	0.141	-1.88
Education in business (edubusin)	1.008*	0.563	1.79	edubusin*	0.191*	0.110	1.74
High taxes (formtaxd)	-1.062*	0.627	-1.69	formtaxd*	-0.170**	0.088	-1.93
Education of the owner (eduow2)	0.194	0.526	0.37	eduow2*	0.034	0.093	0.37
Motivation to start the business (selfemp2)	-0.646	0.549	-1.18	selfemp2*	-0.117	0.100	-1.16
Interaction bdsfin1*mktpr12 (inbdsmkt)	3.566*	2.345	1.52	inbdsmkt	0.631*	0.412	1.53
_cons	2.631**	1.198	2.2				
Number of obs =	105			(*) dy/dx is for discrete change of dummy variable from 0 to 1			
LR chi2(11)=	28.96						
Prob > chi2 =	0.0023						
Pseudo R2 =	0.2273						
Log likelihood =	-49.232424						

Source: Authors' computations.

Note: The level of significance: < or =1 %, between 1% to 5%, > 5% to 10%, imply very significant, significant, and weakly significant, respectively. Figures in brackets are standard errors.
The terms in the table are as defined in Table 3.

The results in Model A (Table 4) indicate that a monthly turnover is positively associated with investment trend and negatively associated with limited access to market and high tax rates. The relationship between monthly turnover and limited access to productive resources is not significant. With respect to the results in Table 6 Panel B, the growth potential of income is negatively associated with limited access to productive resources, limited access to market and high tax rates. The relationship between the growth potential of income and investment trend is not significant.

Regarding access to the market, the results in Table 4 reveal that MSEs which faced limited access to market attained a 189 percent lower average monthly turnover than their counterpart.[9] The results in Table 4 indicate that, when the situation regarding limited market access changes from not a major problem to a major problem, the probability of MSEs experiencing growth in income decreases by around 36 percent. These results verify the alternative hypothesis that limited access to market (i.e. limited customers coupled with high competition) is expected to limit the growth potential and the performance of MSEs.

Therefore, to perform better and grow, MSEs need to have access to differentiated market segments, which operate without stiff competition. This may enable them to attain higher levels of sales at lower transaction costs and hence higher profit (see Sengendo *et al.,* 2001). As a result, MSEs with access to differentiated markets will be encouraged to upgrade their production assets as they expect to sell more, and hence grow (see Reinikka and Svensson, 2001). The results here confirm the importance of different alternatives (viz., sub-contracting arrangements, involvement of MSEs' in public procurement market and strengthening MSEs horizontal joint actions in the area of marketing) undertaken by stakeholders to enhance MSEs' access to market.

Concerning the problem of high taxes, the results in Table 3 reveal that MSEs which reported that high taxes are severe problem attained between a 39 (Model A) and 44 (Model B) percent lower monthly turnover than those which reported otherwise. The results in Table 6 indicate that, when MSEs are relieved of severe high taxes, the probability ofr their income growing increases by 17 percent. These results confirm that high taxes constrain the growth potential and performance of MSEs. These findings corroborate the observations in other studies (e.g. Sengendo et al., 2001; Kappel, Lay, Steiner, 2004) that high taxes arean obstacle to business development in Uganda. Tokman (2001) also reports that high taxes reduce a substantial amount of the income generated by Latin American micro-enterprises. This reducestheir internal sources of funds to finance the expansion of their production operations and growth

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Among the reasons why taxes limit the growth and performance of MSEs is that some MSEs may prefer to remain informal and much smaller to avoid being visible

and paying tax, which may limit their enjoyment of economies of scale. On the other hand, remaining informal and smaller (micro) limits their potential to participate in sub-contracting arrangements, particularly those involving large firms and public projects (Ishengoma and Lokina, 2007; Mlinga and Wells, 2002; and Arimah, 2001), and to have access to productive resources (Loayza, 1997; Weder, 2003)[10].

With respect to the effect of investment trend, the results reveal that growth in productive assets (i.e. machinery) increases MSEs' monthly turnover by around 64 percent. The results confirm the alternative hypothesis that MSEs that face severe investment obstacles, which limit their ability to upgrade their productive assets, perform poorly. This finding complies with the results by Ishengoma (2004b) on the relationship between Tanzanian manufacturing productivity and investment in production equipment, as well as studies linking manufacturers' technical efficiency and investment in productive assets (see Teal, 1999; Piesse and Thirtle, 2000).

As also argued by Reinikka and Svensson (2001), investment in productive assets has a positive effect on a firm's growth, which can be achieved by increasing its turnover. Note that the sample utilised by the previous studies cited here excluded micro manufacturing firms. Thus, irrespective of the size categories, the performance of manufacturing firms is associated with investment in productive assets. This is simply because micro enterprises with relatively more investment in productive assets have more capacity to take more orders, and stand the greater chance of being sub-contracted by relatively large firms (Ranis and Stewart, 1999). These enterprises are also likely to get access to the market for public procurement orders (Morrisson, 1995), since high investment in productive assets demonstrates their ability to meet orders as specified in the contract.

Limited access to productive resources seems to be the major factor that limits the growth potential of MSEs in Uganda and other developing countries. The results in Table 4 reveal that a marginal increase in MSEs' inaccessibility to productive resources reduces their probability of growing by 78 percent. This finding confirms the importance of MSEs' access to productive resources, as argued in other studies (see Ishengoma, 2004b; Kimuyu, 2004).

The predicted probability for a micro or small enterprise to grow is 29 percent. However, further analysis shows that MSEs, which reported that limited access to productive resources is not a major constraint, have a higher probability of growing (43 percent) than those, which reported otherwise (Appendix 1C).[11] MSEs which indicated that limited market access and high taxes are major obstacles to their business operations are not likely to grow since their probability of growing is only 3 percent (Appendix 1D). On the other hand, those which indicated that limited

market access and high taxes are not major obstacles have a relatively high probability of growing (51 percent).

CONCLUSION AND POLICY RECOMMENDATIONS

The aim of this paper was to examine THE extent to which the growth potential and performance of MSEs are associated with business constraints (viz., investment in productive assets, high taxes and access to market and productive resource). The paper utilised the regression models and tried to control for owner's attributes and a firm's characteristics.

The empirical findings reveal that business constraints (investment obstacles, limited access to market and productive resources, and high taxes) hinder the growth potential and performance of MSEs. MSEs which reported that limited access to market is their major problem attained a lower turnover. Furthermore, when MSEs experience limited access to market, their growth potential is likely to decrease. Thus, access to market is an important factor for MSEs to perform better and grow. Managers in MSEs may need to position their firms by producing relatively high quality products, amd undertaking joint marketing strategies in order to penetrate differentiated market segments. From the policy perspective, stakeholders trying to address the problems faced by MSEs in Uganda need to undertake different measures (e.g. sub-contracting arrangements, subsidising their participation in trade fairs, joint marketing) to increase their access to differentiated markets.

When MSEs face severe investment obstacles that limit their ability to upgrade their productive assets, they perform poorly. Policy makers and other stakeholders need to encourage MSEs to upgrade their productive assets. This can be done by enhancing the availability of production equipment and spares in the local market, and the provision of technical services at favourable rates. On the other hand, MSEs may need to try to integrate in global value chains, in order to get better access to technology, knowledge, managerial skills, and also access to export markets (Ishengoma and Kappel, 2007; Keller, 2004; Morrison, Pietrobelli, Rabellotti, 2006; Antras, Helpman, 2004). MSEs may also have to be trained on the need to upgrade their productive assets.

The results show that access to productive resources is very important for abusiness to grow. MSEs' growth is positively associated with access to BDS and finance as these resources may enable a firm to produce the right product, to have access to market at low transaction costs and hence increased efficiency and sales, and to have access to technical information and knowledge through networking.

High taxes limit the performance and growth potential of MSEs in several ways. They reduce their internal sources of financing, discourage them from expanding,

formalising and hence participate in sub-contracting arrangements. Thus, policy makers need to find ways to restructure the tax system in such a way that MSEs pay low tax rates so as to encourage them to grow.

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Tables in Appendix 1

A Pairwise correlation of continuous variables

	invmac2a	bdsfin1	Investob
invmac2a	1		
bdsfin1	0.0126	1	
investob	0.2483***	0.4174***	1

Number of observations = 105. Figures with ***, **, * implies the correlation between the respective variables is very significant, significant and weakly significant, respectively.

As shown below, when regressing bdsfin1 on mktpr12 and invmac2a, the relationship between bdsfin1 and mktpr12 is weakly significant.

Regression results

independent variables	Coefficient.		N=121
invmac2a	0.006		R-square = 0.02
mktpr12	0.0774*		bdsfin1 is a dependent variable
constant	0.630		

B. Test of equality between bdsfin1 and investob

regress lnsalepm on bdsfin1 investob mktpr12 typebu1 location gender edubusin formtaxd eduow2 selfemp2 bdfinsto

Variables:	Coef (Standard Error)	t	P>t
bdsfin1	1.987893 (0.9745774)	2.04	0.044
investob	1.709085 (0.8361456)	2.04	0.044
mktpr12	-0.2369115 (0.1987349)	-1.19	0.236
typebu1	0.5325256 (0.2492823)	2.14	0.035
location	-0.1794398 (0 0.1857852)	-0.97	0.337
gender	-0.5923918 (0.2561913)	-2.31	0.023
edubusin	.4224287 (0.2173293)	1.94	0.055
formtaxd	-0.3379669 (0.205587)	-1.64	0.104
eduow2	0.6479042 (0.1997192)	3.24	0.002
selfemp2	0.4692304 (0.2008203)	2.34	0.022
bdfinsto	-3.279614 (1.41562)	-2.32	0.023
_cons	4.005727 (.592613)	6.76	0
Number of obs =	103		
F(11, 91)	4.12		
Prob > F	0.0001		
Adj R-squared	0.2519		

. test investob=bdsfin1
(1) - bdsfin1 + investob = 0
F(1, 91) = 0.15
Prob > F = 0.7025

Based on the above results, the probability of accepting H0 (i.e. - bdsfin1 + investob = 0) is 0.7 (70%). This indicates that the effects of the two variables on the performance (lnsalepm) of MSEs are equal.

C. Summary statistics of predicted probability of income to grow (proincs2b) when limited access to productive resources is greater or equal to average or less than average value.

	Obs	proincs2b			
Condition		Mean	Std. Dev.	Min	Max
if bdsfin1>= 0.65	58	0.1857558	0.1596835	0.0092642	0.6379203
if bdsfin1<0.65	47	0.4303439	0.2405566	0.0226296	0.9570618

Source: Authors' computation

D. Predicted probabilities when limited access to market and high taxes are not major problems

prvalue, x(mktpr12=0 formtaxd=0)
rest(mean)

Pr(y=1x): 0.5122 95% ci: (0.2144,0.8016)
Pr(y=0x): 0.4878 95% ci: (0.1984,0.7856)

	bdsfin1	invmac2a	mktpr12	typebu1	location	gender	edubusin	formtaxd
x=	0.66857143	.4037143	0	0.75238095	0.47619048	0.76190476	0.35238095	0
	eduow2	selfemp2	inbdsmkt					
x=	0.5047619	0.56190476	0.26095238					

Predicted probabilities when limited access to market and high taxes are major problems

prvalue, x(mktpr12=1 formtaxd=1) rest(mean)

Pr(y=1x): 0.0308 95% ci: (0.0026,0.2807)
Pr(y=0x): 0.9692 95% ci: (0.7193,0.9974)

	Bdsfin1	invmac2a	mktpr12	typebu1	location	gender	edubusin	formtaxd
x=	0.66857143	.4037143	1	0.75238095	0.47619048	0.761905	0.352380	1
	Eduow2	selfemp2	inbdsmkt					
x=	0.5047619	0.56190476	0.26095238					

END NOTES

[1] See for development of African micro and small enterprises (McCormick, 1999; Kappel, 2004) and medium and large manufacturing firms Söderbom and Teal, 2004; Bigsten and Söderbom, 2005; in general Liedholm and Mead, 1999.

[2] See for example, House (1984) on business constraints (viz., inability to establish market, limited liquid capital, limited possibilities to expand investment) faced by Kenyan informal manufacturers; Morrisson (1995) on high (or multiple) and complicated tax system and lack of access to medium and long-term loans as major problems faced by micro enterprises in Algeria, Tunisia and Jamaica. See Liedholm, Mead (1999) for an excellent survey of all aspects of small enterprise growth.

[3] Note that the data for Uganda is of 2002 while those for other African countries (e.g. Tanzania, Zambia, Ghana, Cameroon) are of the mid-1990s. Since some of these countries experienced an increase in capacity utilisation after economic liberalisation and privatisation, it is possible that their capacity utilisation in 2002 is higher than that of the Ugandan manufacturing sector.

[4] See Ishengoma (2006) in the case of limited supply of technical services faced by small-scale bread manufacturers in Tanzania. The manufacturers were forced to consult technicians from Kenya, that increased their maintenances costs.

[5] Sales intervals in Ugandan Shillings (in '000') were 0-30; 30-50; 50-100; 100-200; 200-500; 500-1000; and above 1000. These intervals were transformed into mean values of 15; 40; 75; 150; 350; 750; and 1000 to form a continuous variable.

[6] The two questions are weighted equally, hence allocated the maximum value of 1. The distribution of the values according to responses on a question is 0 for not a constraint at all (not a problem at all), 0.2 for a minor constraint, 0.4 for a moderate constraint, 0.6 for an average constraint, 0.8 a constraint (a problem) and 1 for a very severe constraint. An average index value is treated in the model as a continuous variable. This approach has been adopted by different scholars (see for e.g. Rabellotti, 1999).

[6] The question on investment trends is structured into a four-point scale which was transformed into the index values as 0 = no investment; 0.33 =small investment; 0.66 = medium investment; 1= high investment attained during the past five years.

[8] The survey is based on Kappel, Lay, Steiner, 2003. The data was collected by a team of the Centre for Basic Research, Kampala.

[9] Note that the reported percentages are the expressed antlog of the estimated coefficients minus one and then expressed in percentage.

[10] As addressed by Levenson and Maloney (1998), among the requirements for financial institutions to extend funds to business entities is their registration with government authorities. On the other hand, government asks the financial institutions to report the identity of their business partners for tax purposes.

[11] MSEs which reported limited access to productive resources is not a major constraint are those whose index values on this variable are below an average index value, and the reverse is true for those which reported otherwise.